Claim Listing

1.   (Currently Amended) A computer implemented method
for assessing the risk of a borrower defaulting on a
financial obligation within a predefined market, comprising
the steps of:

(1) receiving a first input indicative of whether the
borrower has previously defaulted on a financial obligation;

(2) receiving a second input comprising a plurality of
credit factors, the plurality of credit factors comprising a
first credit factor and a second credit factor;

(3) determining, using said first input and said second
input, a set of weights, each weight in the set being
assigned to one of said plurality of credit factors;

(3.1) assigning a first weight from the set of weights
to the first credit factor;

(3.2) assigning a second weight from the set of weights
to the second credit factor;

(4) calculating, using said plurality of credit factors
and said set of weights, a probability of default for the
borrower, wherein the calculating step comprises multiplying
the first credit factor by the weight assigned to the first
credit factor to produce a first intermediate result,
multiplying the second credit factor by the weight assigned
to the second credit factor to produce a second intermediate
result, and summing the first and second intermediate
results; and

(5) assessing the risk of the borrower defaulting using
the calculated probability of default.

2. (Original) The method of claim 1, wherein step (3) comprises the steps of:

(a) setting each of said set of weights to a pre-determined value;

(b) calculating, using said plurality of credit factors and said set of weights, a first probability of default for the borrower;

(c) measuring said first probability of default to determine a level of fitness;

(d) determining when said level of fitness is not a good fit; and

(e) setting each of said set of weights to a new calculated value when step (d) determines said level of fitness is not a good fit.

3. (Original) The method of claim 2, wherein said pre-determined value used in step (a) is zero.

4. (Original) The method of claim 2, wherein step (b) comprises the steps of:

(a) using EQUATION (2) to calculate a value indicative of the combination of said set of weights applied to said plurality of credit factors; and

(b) using said value as input into EQUATION (1) to calculate said first probability of default for the borrower.

5. (Original) The method of claim 2, wherein step (c) comprises the step of using said first input and said first

probability of default as inputs into EQUATION (3) to determine said level of fitness.

6. (Original) The method of claim 5, wherein step (d) comprises the step of determining whether said level of fitness can be minimized by more than a pre-determined amount.

7. (Original) The method of claim 6, wherein said pre-determined amount is 10^{-7}.

8. (Original) The method of claim 2, wherein step (e) comprises the step of using maximum likelihood estimation iteration to set each of said set of weights to said new calculated value.

9. (Original) The method of claim 1, wherein step (4) comprises the steps of:

(a) using EQUATION (2) to calculate a value indicative of the combination of said set of weights applied to said plurality of credit factors; and

(b) using said value as input into EQUATION (1) to calculate said probability of default for the borrower.

10. (Original) The method of claim 1, further comprising the step of graphically outputting said probability of default for the borrower.

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11. (Previously Presented) The method of claim 1, further comprising the steps of:

(5) determining, using said first input, a level of predictive accuracy for said probability of default;

(6) determining, when said level of predicative accuracy satisfies a pre-determined threshold, whether said set of weights are unstable; and

(7) generating, when step (6) determines that said set of weights are unstable, a new set of weights to be assigned to each of said plurality of credit factors;

whereby said new set of weights are deemed sufficiently accurate and stable to be used as a basis for assessing the risk of default within the predefined market of different, new borrowers.

12. (Original) The method of claim 11, wherein step (5) comprises the step of using said first input and said probability of default as inputs into EQUATION (3) to determine said level of predictive accuracy for said probability of default.

13. (Original) The method of claim 11, wherein said pre-determined threshold is 10-7.

14. (Original) The method of claim 11, wherein step (6) comprises the steps of:

(a) setting each of said plurality of credit factors to a randomly selected new value wherein said new value is

within a percentage range of the previous value.

(b) calculating, using said plurality of credit factors and said set of weights, a first probability of default for the borrower;

(c) measuring said first probability of default to determine a level of fitness;

(d) determining when said level of fitness is unstable; and

(e) setting each of said set of weights to a new calculated value when step (d) determines said level of fitness is unstable.

15. (Original) The method of clam 14, wherein said percentage range used in step (a) is from 0% to 1%.

16. (Original) The method of claim 11, wherein step (6) comprises the steps of:

(a) receiving a number of desired iterations input;

(b) performing a maximum likelihood estimation iteration said number of times, wherein each of said number of iterations produces a resulting set of weights; and

(c) using a stability process to select one of said number of said resulting set of weights.

17. (Original) The method of claim 11, wherein step (7) comprises the step of using maximum likelihood estimation iteration to set each of said set of weights to said new calculated value.

18. (Previously Presented) A system for assessing the risk of a plurality of borrowers defaulting on financial obligations within a predefined market, comprising:

(a) means for receiving a plurality of first inputs indicative of whether each of the borrowers have previously defaulted on a financial obligation;

(b) means for receiving a plurality of second inputs comprising a plurality of credit factors indicative of the ability of each of the borrowers to repay a financial obligation in the predefined market;

(c) means for determining, using said plurality of first inputs and said plurality of second inputs, a set of weights, each weight in the set being assigned to one of said plurality of credit factors for each of said borrowers; and

(d) a general database that contains a record for each borrower, wherein said record includes the corresponding one of said plurality of sets of weights, said plurality of first inputs, and said plurality of second inputs for each borrower; and

(e) means for processing said records in said general database in order to calculate a probability of default for each of the borrowers.

19. (Original) The system of claim 18, further comprising:

(f) means for graphically outputting said probability of default for each of the borrowers.

20. (Previously Presented) A computer program product comprising a computer usable medium having control logic stored therein for causing a computer to assess the risk of a borrower defaulting on a financial obligation within a predefined market, said control logic comprising:

first computer readable program code means for causing the computer to receive a first input indicative of whether the borrower has previously defaulted on a financial obligation;

second computer readable program code means for causing the computer to receive a second input comprising a plurality of credit factors indicative of the ability of the borrower to repay a financial obligation in the predefined market;

third computer readable program code means for causing the computer to determine, using said first input and said second input, a set of weights to be assigned to each of said plurality of credit factors; and

fourth computer readable program code means for causing the computer to calculate, using said plurality of credit factors and said set of weights, a probability of default for the borrower.

21. (Original) The computer program product of claim 20, wherein said third computer readable program code means comprises:

fifth computer readable program code means for causing the computer to set each of said set of weights to a pre-determined value;

sixth computer readable program code means for causing

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the computer to calculate, using said plurality of credit factors and said set of weights, a first probability of default for the borrower;

seventh computer readable program code means for causing the computer to measure said first probability of default to determine a level of fitness;

eighth computer readable program code means for causing the computer to determine when said level of fitness is not a good fit; and

ninth computer readable program code means for causing the computer to set each of said set of weights to a new calculated value when said eighth computer readable program code means determines said level of fitness is not a good fit.

22. (Previously Presented) The computer program product of claim 20, wherein said fourth computer readable program code means comprises:

fifth computer readable program code means for causing the computer to use EQUATION (2) to calculate a value indicative of the combination of said set of weights assigned to said plurality of credit factors; and

sixth computer readable program code means for causing the computer to use said value as input into EQUATION (1) to calculate said probability of default for the borrower.

23. (Original) The computer program product of claim 20, further comprising: fifth computer readable program code

means for causing the computer to graphically output said probability of default for the borrower.

24. (Previously Presented) The computer program product of claim 20, further comprising:

fifth computer readable program code means for causing the computer to determine, using said first input, a level of predictive accuracy for said probability of default;

sixth computer readable program code means for causing the computer to determine, when said level of predicative accuracy satisfies a pre-determined threshold, whether said set of weights are unstable; and

seventh computer readable program code means for causing the computer to generate, when said sixth computer readable program code means determines that said set of weights are unstable, a new set of weights to be assigned to each of said plurality of credit factors;

whereby said new set of weights are deemed sufficiently accurate and stable to be used as a basis for assessing the risk of default within the predefined market of different, new borrowers.